HOLLOW CORE PHOTONIC BANDGAP OPTICAL FIBER

Abstract Of The Disclosure

A photonic crystal optical fiber made up of an array of conventional hollow core optical fibers is disclosed. The array of optical fibers omits at least one fiber to form a central hollow core. The fiber works on the principle of two-dimensional photonic crystals to confine the radiation in a guided wave within the central hollow core. The fiber has a true photonic bandgap in which radiation of a particular energy or wavelength is totally forbidden, thereby providing a very high reflection coefficient to radiation incident the walls of the central hollow core over a select range of angles. The central hollow core allows for radiation propagation with minimal absorption.